CLASS III CULTURAL RESOURCE INVENTORY FOR THE SNAKE RIVER PLAIN GEOTHERMAL PLAY FAIRWAY ANALYSIS PROJECT, CAMAS COUNTY, IDAHO

DOE Project No. DE EE0006733
CHC Technical Report No. ID-17-051
Idaho SHPO File Search Number 18082

June 2018

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Abstract

Utah State University Department of Geology is conducting research to identify geothermal resources for potential development in connection with a Department of Energy (DOE) grant/contract (DOE No. DE EE0006733) administered by Dr. John Shervais. This project includes the drilling of wells on private property for assessing and accessing geothermal resources. The proposed drilling will potentially take place within two areas, both located on the USGS 7.5' Corral, Idaho quadrangle. Area 1 is located in a portion of the SW¼ of SW¼ of Section 27, and a portion of the NW¼ of the NW¼ of Section 34 within T1S R13E (Boise Meridian). Area 2 is located in a portion of the SE¼ of SE¼ of Section 28, and a portion of the NE¼ of the NE¼ of Section 33 within T1S R13E (Boise Meridian). The identified areas totaling approximately 56.0 acres were intensively surveyed. The survey area was located at approximately 5054 ft. (1540 m) AMSL.

Utah State University Department of Geology (USU) contracted Cannon Heritage Consultants, Inc. (CHC) to conduct an intensive cultural resource inventory of the proposed drilling areas towards compliance with Section 106 of the National Historic Preservation Act (NHPA). The results of these investigations are presented in this report.

At the request of CHC, Shannon Vihlene of the Idaho State Historic Preservation Office (SHPO) on 18 December 2017 conducted a cultural resources file search covering a 1.0-mile buffer surrounding the proposed project area (Idaho SHPO File Search No. 18082). This file search included other areas of potential drilling, later eliminated from this project. The cultural resource file search identified three cultural properties within the 1.0-mile buffer, indicating both pre-contact and historic sites are known to be present on the landscape.

On 14-15 May 2018, Paul Santarone (CHC Field Director) and Aaron Larsen (CHC Archaeologist) conducted the intensive inventory for the Snake River Plain Geothermal Play Fairway Analysis (SRPG) project under the direction of Dr. Kenneth P. Cannon (CHC Principal Investigator). The intensive inventory used 15-meter transect intervals to cover the ground surface component of the APE for a total of approximately 56.0 acres. No historic properties occur within the APE of this project per results of the cultural resource file search and intensive inventory. Therefore, CHC recommends a finding of *no historic properties* within the APE of the Snake River Plain Geothermal Play Fairway Analysis project.

Current plans include no ground disturbing activities beyond the drill-hole (approximately 16-inches in diameter), although due to the nature of the project some factors cannot be determined prior to the set-up of the drilling rig, and additional ground disturbing activities may be required. In light of the importance of this region in precontact lifeways, and in recognition of the high archaeological potential of the landform and noting the presence of camas plants within the surveyed area, we recommend the presence of a qualified archaeological monitor for all ground disturbing activities occurring within the first 5 meters of the current ground surface.

CERTIFICATION OF RESULTS

I certify that this investigation was conducted and documented according to Secretary of Interior's Standards and guidelines and that the report is complete and accurate to the best of my knowledge.

Kenneth P. Cannon

Signature of Principle Investigator

6/27/2017

Date

Key Information

PROJECT NAME

Class III Cultural Resource Inventory for the Snake River Plain Geothermal Play Fairway Analysis Project, Camas County, Idaho

PROJECT NUMBER(S)

DOE Project No. DE EE0006733
CHC Technical Report No. ID-17-051
Idaho SHPO File Search Number 18082

LOCATION

Camas County, Idaho

USGS QUADS

USGS 7.5' Corral, Idaho Quadrangle

LEGAL LOCATION OF SURVEY

Area 1 APE/Intensive Inventory: A portion of the SW¼ of the SW¼ of S27, and a portion of the NW¼ of the NW¼ of S34 in T1S R13E (Boise Meridian)
Area 2 APE/Intensive Inventory: A portion of the SE¼ of the SE¼ of S28, and a portion of the NE¼ of the NE¼ of S33 in T1S R13E (Boise Meridian)

PROJECT AREA

56.0 Acres (APE)

AREA SURVEYED

56.0 Acres Intensive Survey
0 Acres Reconnaissance Survey

PROJECT DATA

3 Previously recorded cultural resources; 1 NRHP eligible properties
0 New cultural resources located and/or recorded

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FEDERAL AGENCY

Department of Energy (DOE)

REPORT PREPARED FOR

Utah State University Department of Geology

REPOSITORY

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DATE

5/20/2018

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Project Description

Utah State University Department of Geology is conducting research to identify geothermal resources for potential development in connection with a Department of Energy (DOE) grant/contract (DOE No. DE EE0006733) administered by Dr. John Shervais. This project includes the drilling of wells on private property for accessing and assessing geothermal resources. The proposed drilling will potentially take place within two areas, both located on the USGS 7.5' Corral, Idaho quadrangle. Area 1 is located in a portion of the SW¼ of SW¼ of Section 27, and a portion of the NW¼ of the NW¼ of Section 34 within T1S R13E (Boise Meridian). Area 2 is located in a portion of the SE¼ of SE¼ of Section 28, and a portion of the NE¼ of the NE¼ of Section 33 within T1S R13E (Boise Meridian). The identified areas totaling approximately 56.0 acres were intensively surveyed. The survey area was located at approximately 5054 ft. (1540 m) AMSL.

Current plans include no ground disturbing activities beyond the drill-hole, although due to the nature of the project some factors cannot be determined prior to the set-up of the drilling rig, and additional ground disturbing activities may be required. The drill-hole will be approximately 16-inches in diameter and will be cased with a 13-inch diameter casing.

Utah State University Department of Geology (USU) contracted Cannon Heritage Consultants, Inc. (CHC) to conduct an intensive cultural resource inventory of the proposed drilling areas towards compliance with Section 106 of the National Historic Preservation Act (NHPA). The results of these investigations are presented in this report.

Project Area of Potential Effect (APE)

The APE is defined as the area of potential ground disturbance and includes any property, or portion thereof that will be physically altered or destroyed by the undertaking. The APE for this project are the areas which were identified as the areas within which drilling would potentially be taking place. For this project, the APE was defined by two survey areas totaling approximately 56.0 acres (Figure 1).

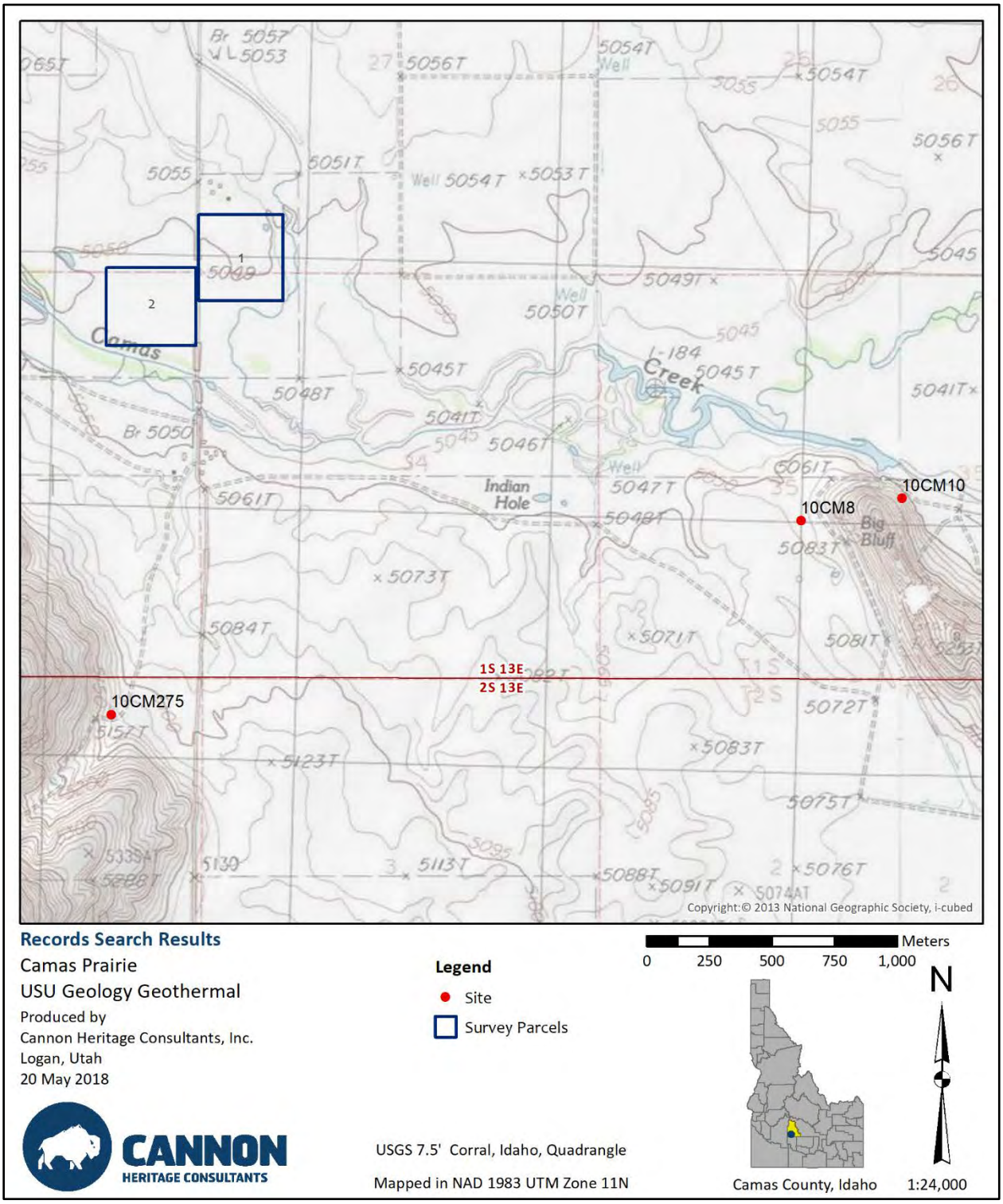

Figure 1. Project location and file search results map.

Environmental Setting

The SRPG project area is located on private property belonging to SV Ranch LLC., within the administrative boundaries of Fairfield, Camas County, Idaho (Figures 2-5). The APE is made up of two grass-covered agricultural fields. The survey areas are located along S 600 W Rd. (also known as Barron Rd.), south of intersection with W 200 S Rd. in the area near the courses of Camas and Corral Creeks in a generally agricultural area with minor residential development.

In general terms, the project area is located on the Camas Prairie, an east-trending intermontane basin that includes the entirety of Camas County and portions of Elmore, Gooding, and Blaine counties (Young 1978). The Camas Prairie is separated from the Snake River Plain by several mountain ranges, including the Soldier Mountains to the north and the Mount Bennett Hills to the south. The Camas Prairie was downdropped from the Solider Mountains by a concealed normal fault (Link 2002). Geologically, the Camas Prairie formed as an extensional graben (i.e., structural depression) consisting of alluvial deposits that accumulated behind Pleistocene basalt flows (Garwood et al. 2014; Walton 1962). North of Camas Creek in the vicinity of Fairfield, sedimentary deposits consist of Holocene and Pleistocene alluvium overlying older Pleistocene and Pliocene deposits (Garwood et al. 2014). The basin is drained by Camas Creek, a tributary to the Big Wood River that flows through central Idaho from its source in the Sawtooth Range.

According to soil survey data maintained by the Natural Resource Conservation Service (NRCS) soils within the project area consist of Riceton Coarse Sandy Loam and Strom Sandy Clay Loam soils (NRCS 2018). Riceton Coarse Sandy Loam soils are composed of mixed alluvium and formed on terraces and fan remnants with between 0 and 4% slopes (NRCS 2018). Riceton Coarse Sandy Loam soils are well drained, and the depth to restrictive feature is listed as greater than 80 inches (NRCS 2018). Strom Sandy Clay Loam soils are composed of mixed alluvium and formed on alluvial fans, flood plains, and stream terraces with between 0 and 4% slopes (NRCS 2018). Strom Sandy Clay Loam soils are somewhat poorly drained, and the depth to restrictive feature is listed as greater than 80 inches (NRCS 2018).

The Western Regional Climate Center (WRCC) maintains historic climate data collected from weather stations across the western United States. The nearest weather station to the project area, for which data are available, is the Fairfield RS, Idaho station (Number 103108). Climate data collected at this weather station from 1948 through 2016 documents an average daily January minimum temperature of 5.4°F (maximum of 28.9°F) and an average July daily maximum temperature of 85.5°F (minimum of 46.3°F). The area experiences precipitation averaging about 14.5 inches per year with 65.1 inches of snowfall (WRCC 2018).

Relating this developed landscape to patterns of prehistoric and historic use is difficult. Considerable environmental changes have occurred within the potential period of anthropogenic use. The project area is located within a broader area of developed roadways and agricultural facilities and structures. Modern Euroamerican development has significantly impacted native ecology in the area. Additionally, water courses in the area have been altered to accommodate development, including agricultural irrigation use. The project area is populated with a mix of domestic and introduced species.

Figure 2. Area1 overview facing southwest. Photo taken by Paul Santarone on 15 May 2018.

Figure 3. Area 1 overview facing northeast. Photo taken by Paul Santarone on 15 May 2018.

Figure 4. Area 2 overview facing south. Photo taken by Paul Santarone on 15 May 2018.

Figure 5. Area 2 overview facing southeast. Photo taken by Paul Santarone on 15 May 2018.

Cultural Setting

For the purposes of this small cultural resource inventory project, a generalized precontact cultural context is provided in this section, followed by a short historic context tailored to known and potential cultural resources in the area.

Precontact Setting

The Snake and the Salmon River basins in southern Idaho serve as a natural corridor linking the Northwest Plains with the Intermountain area including the Great Basin and the Columbia Plateau (Butler 1986). Due to this geographical location, the cultural chronology of southern Idaho is influenced by and associated with the Great Basin and Plains Culture Area chronologies (Butler 1986; Plew 2008). Realizing these shifting connections with extra-regional cultures, what follows is a summary of southern Idaho's prehistoric cultural chronology as presented by Butler (1986) and expanded by Plew (2008).

The earliest human occupation of southern Idaho began during the Paleoindian (Early Big Game Hunting) Period dating back at least 15,000 years before present (B.P.) and continuing to about 7,800 B.P. (Butler 1986; Plew 2008). This period is characterized by mobile hunter-gatherers during the Terminal Pleistocene presumably focusing on hunting now extinct megafauna. Three Subperiods are recognized during the Paleoindian period that are primarily differentiated by changing lithic technology and inferred subsistence practices. These Subperiods include the Clovis (12,000-11,000 B.P.), Folsom (10,000-9,600 B.P.), and the Plano Subperiods (10,600-7,800 B.P.) (Plew 2008). Further research is continually refining the ages of these Subperiods. Key sites in the region that date to this period include the Simon Clovis Site, the Buhl Burial, the Wasden Site (Owl Cave), and the Veratic Rockshelter (Plew 2008). Additionally, excavations at the Wilson Butte Cave from 1959 to 1960 found extinct Pleistocene fauna possibly associated with cultural materials dating to the Paleoindian Period with radiocarbon dates as old as 15,000 ± 800 RCYBP (Gruhn 1961). More recent research at the site found that the oldest tentatively acceptable radiocarbon date to be 10,700 ± 100 RCYBP dating to the early Paleoindian Period (Gruhn 2006).

The Archaic Period begins around 7,800 B.P, roughly corresponding to the onset of Holocene environmental conditions. This period is characterized by expanded resource exploitation and increasing social and technological complexity (Plew 2008). Spear points typical of the Paleoindian Period were replaced by new forms including side-notched and stemmed-indented base tools (Butler 1986). This shift in point morphology may indicate the introduction of atl atl and dart technology to the region. During the Archaic Period the use of ice caves for storage and drinking water was proposed by Henrikson (1996, 2002). Ice caves are a unique geologic feature fairly common in the Snake River Plain. These features have drawn the attention of several recent archaeological investigations (e.g., Henrikson 2002; Plew 2003; Henrikson 2004; Henrikson 2005).

The Archaic Period is divided into three Subperiods — Early Archaic (8,000-5,000 B.P.), Middle Archaic (5,000-2,000 B.P.), and Late Archaic (2,000-250 B.P.) (Plew 2008). During the Late Period, Butler (1986) noted that two cultural traditions may be present in the region including the Northern Fremont (Formative-staged Culture) located as far north as the Snake River Plain and Shoshonean cultures. During this Late Period, projectile point morphology shifted to smaller corner-notched and side-notched point types and

ceramic technology was introduced. This shift in point types may indicate the introduction of bow and arrow technology to the region (Holmer and Ringe 1986). Key sites in the region that date to the Archaic period include the Malad Hill, Weston Canyon Rockshelter, Jimmy Olsen Rockshelter, the Wilson Butte II Site, Dean Site, Warm Creek Spring, Dry Creek Rockshelter, Danskin Rockshelter, Baker Caves, Ashtrap Shelter and others (Plew 2008).

The Protohistoric Period began with the introduction of the horse and other European trade items during the late 1700s and early 1800s (Plew 2008). This period reflects a time of extensive reconfiguring of aboriginal lifeways as European interaction expanded. European influence altered or replaced many traditional subsistence practices, technologies, social organization, and land-use patterns of the aboriginal populations (Holmer and Ringe 1986). Key sites in the region that date to the Protohistoric period include the occupations at Bliss and the Wahmuza Site (Plew 2008). The Challis Bison Kill Site, originally interpreted as historic in age, appears to be much earlier in age (Cannon and Cannon 2010).

At the time of Euroamerican contact, the people of the area were closely identified with groups in the northern Great Basin (Steward 1938). Julian Steward (1938) characterizes northern Great Basin groups as highly mobile hunter-gatherers. Group size varied dramatically throughout the year. Fissioning of larger entities into smaller family groups occurred in the spring or early summer. Re-aggregation occurred in the fall or early winter, although large social groups formed in particularly productive resource areas throughout the seasonal cycle. A great deal of emphasis is placed on the procurement of fish and the tethering of the seasonal cycle to riverine resources. Winter encampments were often on the Snake River due to better weather conditions and strategic use of preserved fish caches taken in season (Steward 1938).

Ethnographically the project area is associated with Sahaptan-speaking Nez Perce and Numic-speaking Shoshone and their predecessors (Wildeson 1982). To the north and west, Sahaptan speakers occupied the region between the Cascades of Washington east across the Columbia Plateau to the Rocky Mountains. These groups include the Nez Perce, Cayuse, Walla Walla, Umatilla, Kutenai, and Sampoil-Nespelem. Numic groups, including the Paiute, Shoshone, Bannock, and Comanche, occupied the greater part of the desert west from the Oregon Cascades to the Rocky Mountains, and south to the Gulf of Mexico.

Even though human groups have occupied the valleys and uplands of central Idaho for at least the past 12,000 years or so, there is a paucity of evidence for the early portion of this time period. Until around the nineteenth century these groups existed as hunter-gatherers subsisting on local resources: then trade brought them in contact with a much larger world than pedestrian travel made feasible. By the nineteenth century, and perhaps earlier, significant change in their socioeconomic system had been brought about by contact with Euroamericans. The natural system of the region experienced unparalleled change with settlement of Euroamericans in the mid-nineteenth century through the introduction of domestic stock, irrigation, and mining. The following is a brief overview of the area's aboriginal culture history.

The Northern Shoshone groups of central Idaho shared cultural patterns with those of the Great Basin area, as well as the Great Plains (Murphy and Murphy 1986). Much of our understanding of these groups is based upon Steward's (1938) ethnographic studies of the Sheepeater and Lemhi Shoshone of central

Idaho. Additional ethnographic work by Lowie (1909), Murphy and Murphy (1960; 1986), Franzen (1978), Madsen (1980), and Walker (1998) has added to our understanding of these groups.

Within the Shoshone region of the study area, the identification of local groups in the historic and ethnographic literature is based largely on associated food resources. For example, the inhabitants of the Boise River were referred to as Yahandeka (groundhog eaters), while those of the Snake River were referred to as Agaideka (salmon eaters) and those of the Sawtooth Range as the Tukudeka (sheep eaters). This flexible nomenclature, in which multiple ethnonyms may have been attached to people of a single locale or across wider regions, has complicated anthropological understandings of Shoshone sociopolitical organization and band formation (Murphy and Murphy 1986).

Walker (1978) provides a description of characteristic features of their Great Basin cultural pattern:

> *Subsistence focused on intensive exploitation of nuts, seeds, roots, cactus, insects, small game animals, birds, and occasional large game. This pattern involved frequent movement.*
>
> *Limited interaction with groups except immediate neighbors.*
>
> *Band political organization, bilateral kinship, polygyny, and polyandry, with primarily patrilocal or bilocal residence. Occasional infanticide or senilicide was practiced. Local communities were rarely larger than 30 individuals and residences were near water resources in oases and at higher elevations.*

To the north, the Nez Perce who occupied the middle Snake and Clearwater Rivers and the lower Salmon River cultural patterns are most concisely described by Walker (1978, 1998):

> *Adaptation to a riverine environment that included watercraft and elaborate fishing technology. Approximately half of their food base came from fish and aquatic resources with the remainder being from large game and abundant tuberous root crops.*
>
> *Band and composite band political organization with intensive interaction between local groups based on Kinship, trade, and political ties. Emphasis was placed on democratic and peaceful interpersonal intergroup relations.*
>
> *Bilateral kinship, polygamy, primarily patrilocal residence with local communities rarely larger than 100 individuals. Winter residence was in major river valleys in semisubterranean houses.*
>
> *Shaman-centered religion that placed an emphasis on the individual vision quest for tutelary spirit.*

Pre-Contact and Historic Land-Use Context

Based on ethnohistoric and ethnographic sources the Camas Prairie was an important area for pre-contact peoples of the region. The Camas Prairie was a gathering place for Native groups from across the region including the Great Basin, the Columbia Plateau and the Plains (Steward 1938). The Camas Prairie was not only an important area for trading, socializing, and meeting with other people. It was also essential for the gathering of food for storage and consumption over the winter months. Camas was harvested and processed in great quantities, however camas was not the only important resource which was harvested. Other important resources harvested on the Camas Prairie included: yamp, pa: sigo, and yutavo (Steward 1938). Harvested and preserved foods were transported from the area to winter camp locations.

The project occurs within the administrative boundaries of Fairfield in Camas County, Idaho. The following short historical synopsis provides a summary of the history of Fairfield focused on settlement themes and tailored to the scope of this project. Several published sources cover in detail the history of Idaho (e.g. Beal and Wells 1983; Schantes 1991; Walker 1978) and are not repeated in this short context.

In the Camas Prairie region of south-central Idaho, European encroachment began in 1820 with the fur trade efforts of Donald McKenzie, a Scottish-Canadian trader employed by the North West Company to explore the Snake River Basin (Idaho Historical Society 1969). From 1820 to 1840, the region was opened to competing American and British fur trade interests. Until 1852, the major American emigration route of the Oregon Trail did not reach as far north as the Camas Prairie. However, a decade later the Camas Prairie route had become a well-traveled branch of the Oregon Trail known as Goodale's Cutoff.

Euroamerican settlement of the Camas Prairie was initiated during the South Boise gold rush of 1863. At this time, a series of conflicts emerged between settlers and Northern Shoshone and Bannock bands that eventually culminated in the Bannock War of 1878. Settlement increased in the region with a second mining rush on the Wood River in 1880, which founded the farming settlements of Soldier and Crichton.

Soldier remained a commercial and social center in Camas County throughout the late 1800s until Fairfield was founded in 1911 in association with the Oregon Short Line Railroad, which extended from Granger, Wyoming through south-central Idaho (Camas Chamber of Commerce 2017). At this time, Fairfield emerged as a transportation hub for the flourishing sheep business in Camas County. In 1917, Fairfield was designated as the county seat of Camas County. Agriculture continues to be important in the local economy. According to 2010 U.S. Census data, Fairfield has a population of 416 people, which has remained relatively stable over the past decade.

Pre-Field Research

At the request of CHC, Shannon Vihlene of the Idaho State Historic Preservation Office (SHPO) on 18 December 2018 conducted a cultural resources file search covering a 1.0-mile buffer surrounding the proposed SRPG project area (Idaho SHPO File Search No. 18082).

In addition to the cultural resource file search through the Idaho State Historic Preservation Office, CHC archaeologists conducted a search of digitized historic land use records maintained by the Bureau of Land Management (BLM 2018). These records include General Land Office (GLO) plat maps, historical indices, Master Title Plats, land patents and other available records. Based on this research, 25 private land patents were filed within Sections 27, 28, 33, and 34 T1S R13E (BLM 2018) between 1892 and 1937. Both survey areas (Area 1 and Area 2) for this project were patented to Edward Gibbons between 1892 and 1895. The GLO plat map detailing the original survey completed by Allen M. Thompson (Deputy Surveyor) in November 1871 shows no historic features or structures within the survey areas (BLM 2018). In summary, the historic land use records suggest that permanent Euroamerican settlement began in the general vicinity of the Direct APE by at least the 1880s.

Previous Cultural Resources Studies

Per the results of the file search (Idaho SHPO File Search No. 18082), a total of four previously conducted cultural resource studies have occurred within the 0.5-mile file search area. All of these projects have been reported since 1989 and are therefore presumed to have employed adequate field methods, survey design, and field personal adherent to contemporary professional standards. These projects can be generally related to water resource development and have tended to focus on historic rather than prehistoric themes and resources. No known cultural resources were identified within the project Direct APE as a result of these previously conducted cultural resources studies.

Table 1. Previous cultural resource studies (Idaho SHPO file search number 18082).

Report Number	Title	Author	Agency	Project Number
1999/697	Leonard Brown	D. Ames	National Resource Conservation Service	NRCS982406
2002/447	SV Ranch LLC., Spring Developments	T. Burnham	National Resource Conservation Service	NRCS023951
20014/45	Camas Creek Streambank Stabilization and Habitat Improvement Project	Carla Burnside	US Fish and Wildlife Service	
2015/560	U.S. Fish and Wildlife Service: Cultural Resources Annual Report Pursuant to Programmatic Agreement for FY2014.	Region 1, Region 8 Cultural Resources Team	US Fish and Wildlife Service	

Expected Cultural Resources

The cultural resource file search (Idaho SHPO file search number 18082) identified three previously documented cultural resources within the 1.0-mile file search buffer (Figure 1). These cultural resources included two precontact lithic scatters (sites10CM8 and 10CM10) and one historic structure with an associated historic material scatter (site 10CM275). See Table 2 below for details.

Based on the importance of the region to precontact lifeways, the position of the proposed project area on the braoder landscape, and the observation of a known resource (camas)at this location, intensive precontact or historic use of the project area is at least moderately likely. Historic land-use of the project area was probably limited to low intensity agricultural use. For these reasons, the APE is at least moderately likely to contain as yet undocumented cultural resources.

Table 2. Previously recorded cultural resources (Idaho SHPO file search 18082).

Number	Attributes	NRHP Status
10CM8	Unknown possible lithic scatter	Undetermined
10CM10	Chips and Ignimbrite Nodules, possible pestle fragment	Undetermined
10CM275	Lava rock building (root cellar) and historic debris associated with the Wardup homestead.	Eligible

Field Methodology

On 14-15 May 2018, Paul Santarone (CHC Field Director) and Aaron Larsen (CHC Archaeologist) conducted the intensive inventory for the SRPG project. The intensive inventory covered the ground surface component of the APE, within two designated areas for a total of about 56.0 acres. The survey employed 15-meter transect intervals.

Area 1 was contained within a grass-covered agricultural field. Ground surface visibility in Area 1 was poor with approximately 20% visibilty overall (Figures 2 and 3) due to the presence of grasses. A few areas of bare earth were present sporadically arranged across the surface of the survey area.

Area 2 was also contained within a grass-covered agricultural field. Area 2 ground surface visibilty was approximately 20% due to grass cover (Figures 4 and 5). Sporadic bare earth patches were also present in Area 2.

Project locational data (as needed) were recorded using a Trimble Juno handheld GPS unit and maps were produced using ArcGIS Version 10.3 software. Project photos were taken with a Fujifilm FinePix XP90 digital camera (16.4 mexapixel) equipped with a 5x optical Fujinon zoom lens (28-140mm). The digital camera was positioned about 1.5 m above the ground surface for all photographs.

Results

The intensive cultural resource inventory covered the ground surface component of the SRPG APE for a total of approximately 56.0 acres. No cultural resources or historic properties occur within the Direct APE per results of the cultural resource file search and intensive cultural resource inventory. Therefore, we recommend a finding of *no historic properties* within the APE for this project.

However, in light of the importance of this region in precontact lifeways, and in recognition of the high archaeological potential of the landform and noting the presence of Camas plants within the surveyed area, we recommend the presence of a qualified archaeological monitor for all ground disturbing activities occurring within the first 5 meters of the current ground surface.

Management Recommendations and Conclusions

Known archaeological resources on the Camas Prairie include sites and artifacts dating to the earliest period of human settlement of Idaho, establishing a history of land-use in the region dating back 11,000 or more years BP. Ethnohistoric and ethnographic information clearly indicates that the Camas Prairie region was fundamentally important in the social and subsistence activities of precontact peoples. This well-watered and highly productive area was almost certainly intensively used throughout the period pre-dating the arrival of Euroamerican populations.

Based on historic research and the general pattern of development for the broader area, the study area would likely have been subject to permanent Euroamerican settlement by at least the 1880s. Euroamerican settlement and development accelerated in the late nineteenth and early twentieth centuries. Areas of outlying settlements and industrial centers were often co-opted into agricultural production, and subject to related development (for example clearing, leveling, and irrigation). The late nineteenth and early twentieth centuries in the region also included development of transportation corridors and irrigation systems.

No known cultural resources or historic properties occur within the 56.0-acre APE per results of the cultural resource file search and intensive inventory. Therefore, CHC recommends a finding of *no historic properties* within the SNPG APE. The proposed project area is moderately likely to obscure buried cultural materials, due to the importance of the region in precontact lifeways, the position of the location on the broader landscape, and the presence of a known subsistence resource (camas) in the survey area. We recommend the presence of a qualified archaeological monitor for all ground disturbing activities occurring within the first 5 meters of the current ground surface. In the event that cultural materials are encountered during ground disturbing activities, all work should cease, and the State of Idaho Archaeologist at the Idaho SHPO should be notified (208.334.3861). The State of Idaho Archaeologist will

provide guidance on how to proceed. CHC recommends a finding of *no historic properties* within the APE of the Snake River Plain Geothermal Play Fairway Analysis project..

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